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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,685	07/24/2003	Shinichiro Fujita	116658	1082

25944 7590 10/21/2005

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

DANG, KHANH

ART UNIT PAPER NUMBER

2111

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/625,685	<b>Applicant(s)</b> FUJITA ET AL.	
	<b>Examiner</b> Khanh Dang	<b>Art Unit</b> 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,12-14 and 16-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5-9,12-14 and 16-19 is/are allowed.
- 6) ☒ Claim(s) 20-22 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 23 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Newly added claims 20-22, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (Miller, 6,052,745).

With regard to claim 20, Miller discloses a data transfer control system (shown generally at Figs. 1 (a, b)) for transferring data through a bus, comprising: a command processing section (in Miller, it is clear that the external interface unit 160 is readable as the so-called "command processing section," see also column 2, lines 7-20) which receives a command packet (a read/write request, for example, asserted by CPU 130, for example, see at least column 4, lines 61-62, column 6, line 37) transferred through a first bus (local bus PLB) and issues a command included in the command packet (it is clear that the interface unit 160 must subsequently issues a read/write command included in the request asserted by the CPU 130) to a device (it is clear that peripheral devices are connected to the interface unit 160 via an external bus, see at least column 1, lines 15-17) connected with a second bus (external bus, Fig. 1a); and a Direct Memory Access (DMA) transfer instruction section (DMA controller 140). Miller further discloses that the CPU 130 or master 20/22 sets a fixed data length irrespective of the

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type of issued command. For example, for a single read transfer shown Fig. 2, it is clear that since it is a single read, the data length is fixed. Another example is Fig. 3, which shows a four-word line read transfer. Since this is a four-word line transfer, as the name clearly implies, it is clear that the data length is fixed. In another example, a burst transfer is described, wherein under a burst transfer protocol, fixed length burst of data is provided when requested by the master, see at least column 4, line 48 to column 5, line 5, Fig. 1b, and claim 1 of Miller. After fixed length burst, for example, is requested, data transfer is started to or from the peripheral device (column 1, lines 15-17) connected to the external bus (Fig. 1a). In summary, in Miller, fixed length data transfers are controlled by the CPU 130 or master 20/22. With regard to already-cited limitations in newly added claims 20-27, see discussion above. With regard to newly introduced limitation in newly added claims 20-27, see discussion below, under "Response to Arguments."

Miller does not disclose that fixed length data transfers can be controlled by the DMA 140, instead of the CPU 130 or master 22/26.

However, using DMA controller for data transfers instead using the CPU is old and well-known in the art. It is important to note that DMA controller (direct memory access controller) is system that can control the memory system without using the CPU to provide faster data transfer, and only one or the other of the PCU and the DMA can use the memory at the same time, see at least "What is Direct Memory Access (DMA)?" cited below.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the DMA instead of the CPU to control data transfer, particularly fixed length data transfer, as in Miller, since the use of DMA for controlling data transfer without the use of the CPU is old and well-known (as evidenced by at least "What is Direct Memory Access (DMA)?"); and using DMA for data transfer in Miller, for the purpose of providing faster data transfer, only involves ordinary skill in the art.

With regard to claim 21, it is clear from Miller that either the master or peripheral device in Miller can issue a command indicating completion processing. See at least column 6, lines 41-45. With regard to claim 22, it is clear that the local bus 120 is a bus through which data is transferred according to a first interface standard (defined by IBM Powerpc protocol) and the external bus is a bus through which data is transferred according to a second interface standard, a peripheral bus interface different from the Powerpc bus interface. Further, it is clear that command packet is a packet defined by a "higher" layer of the Powerpc interface. With regard to claims 10-14, 17, and 18, see discussion above. With regard to claims 24-26, see discussion above and also discussion under "Response to Arguments."

### ***Response to Arguments***

Applicants' arguments filed 8/25/2005 have been fully considered but they are not persuasive.

At the outset, Applicants are reminded that claims subject to examination will be given their broadest reasonable interpretation consistent with the specification. *In re*

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*Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). In fact, the “examiner has the duty of police claim language by giving it the broadest reasonable interpretation.” *Springs Window Fashions LP v. Novo Industries, L.P.*, 65 USPQ2d 1862, 1830, (Fed. Cir. 2003). Applicants are also reminded that claimed subject matter not the specification, is the measure of the invention. Disclosure contained in the specification cannot be read into the claims for the purpose of avoiding the prior art. *In re Sporck*, 55 CCPA 743, 386 F.2d, 155 USPQ 687 (1986).

With this in mind, the discussion will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitations that are not in the claims or any arguments that are irrelevant and/or do not relate to any specific claim language will not be warranted.

### **The 103 Rejection:**

Applicants argue that “Miller states in column 1, lines 15 to 17 that the “peripherals in a computer system were normally attached to the processor via an external bus now are attached to a local bus” (PLB in a computer system). Accordingly, in Fig. 1 of Miller the peripheral devices (master device, slave device) are attached to the local bus PLB but not to the external bus. Therefore, it is clear that the assertion of the Office Action is incorrect.”

In response to Applicants’ argument, it is clear that not ALL peripherals are connected to the local bus. As a matter of fact, Miller discloses that “many of the peripherals in a computer system were normally attached to the processor via an

external bus now are attached to a local bus." It is clear that "many of the peripherals" does not equate to "all of the peripherals." Further, if there is no peripheral connected to the external bus then there is no reason for the External Bus Interface Unit 160 and the External Bus to be present in the circuit shown in Fig. 1A.

Applicants further argue that "Miller is silent about omitting decode processing of a command (which is included in a command packet transferred through a first bus) for calculating the size of a DMA data length and issuing the command to a device connected with the second bus. Instead, Miller discloses decode processing of a command from calculating the size of a data length for a burst transfer. See column 4, line 36 to column 5, line 5 of Miller. Unless decode processing of a command is carried out, it is impossible to generate the BE signals shown in Table 2 of Miller (see column 5 of Miller).

In response to Applicants' argument, column 4, line 36 to column 5, line 5 of Miller, does NOT disclose "decoding processing of a command." The true table (Table. 2) shows the predetermined output states for every possible combination of input states. The slave does not have to decode any signal. The slave can access this information and know ahead of time when the transfer will end (see col. 5, lines 19-21). Further, there is no reason to calculate the size of data length using decode processing, since Miller provides fixed data length. In any event, it is only an OPTION to provide data length information using BE signals (see column 5, lines 43-64).

***Allowable Subject Matter***

Amended claims 1-3, 5-9, 12-14, and 16-19 are allowed.

Newly added claims 23 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 571-272-3626.

*Khanh Dang*

Khanh Dang  
Primary Examiner